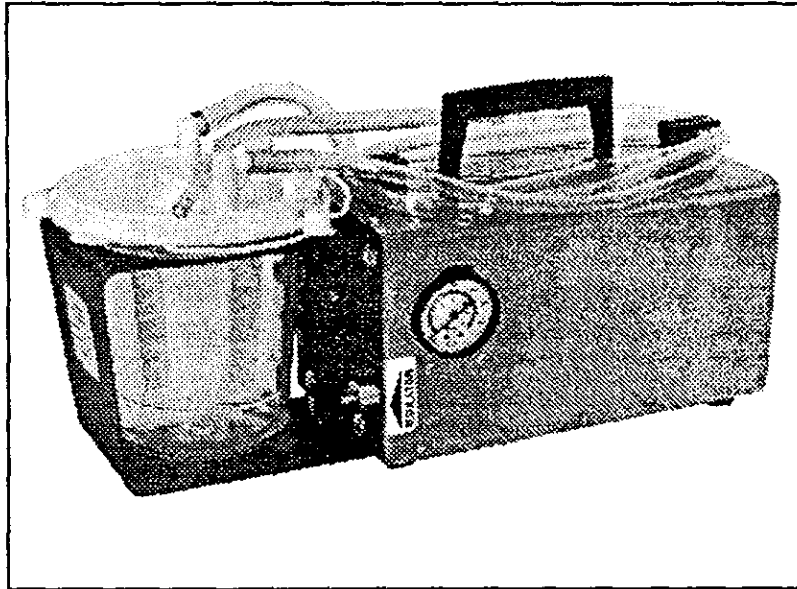


**OPERATING INSTRUCTIONS
AND
MAINTENANCE MANUAL**

S-SCORT..JR.[®]

MODEL 90024B



SSCOR, INC.

11064 Randall Street
Sun Valley CA 91352
Tel 800/434-5211
Fax 818/504-6032

CAUTION - NOTICE

**FOR DC VOLTAGE ONLY.
DO NOT CONNECT DIRECTLY TO 115V AC.
EXCEPT THROUGH SSCOR AC TO DC BATTERY
CHARGER PART # 80525**

A suction tip with a thumb control should be used routinely during the procedure.

Federal law restricts this device to sale, distribution, and use by or on the order of a physician, emergency medical technician, or other medical practitioner.

Operator should be thoroughly familiar with these operating instructions before using.

Do not use in the presence of flammable agents or anesthetics.

The suction pump must be reconnected to the battery charger after each use and remain connected until needed.

The shut-off valve in the canister lid will close down when canister is filled with fluids. See "Canister Instructions", Page 15.

Install a new canister before testing for negative pressure over 300mmHg to minimize possibility of implosion, which can occur in instances where a canister is aged or damaged.

SSCOR's battery charger charges batteries only. The battery charger will not run the pump

Table of Contents

Caution-Notice	2
General Description	4
Important Features	5-7
Operating Instructions	8-9
Warning	9
Maintenance	10
Trouble Shooting	11
General Specifications	12
Warranty	13
Replacing the Fuse and Battery Pack	14
Electrical Diagram	14
Canister Instructions	15
Pump Drawing and Parts List	16

S-SCORT..JR.® Model 90024B

Battery Operated - Portable Suction Pump

U.S. Patent D270948

ETL Listed, conforms to UL STD 544

© 1995 SSCOR, Inc. S-SCORT..JR, HI-D and Big Stick are registered trademarks of SSCOR, Inc.

GENERAL DESCRIPTION

S-SCORT..JR[®] Model 90024B

S-SCORT..JR is a portable, 12V DC battery operated suction pump for constant suctioning during resuscitation emergencies.

“It is powerful enough to provide an airflow of more than 30 liters/minute at the end of the delivery tube and a vacuum of more than 300mmHg when the tube is clamped.”¹

S-SCORT..JR is powered by sealed lead acid batteries, capable of driving the unit at full power for 30 minutes and at gradually reduced power for an additional 15 minutes. The batteries are recharged by a 115V AC to 13.8V DC Dual Mode Automatic charger (included with the unit).

S-SCORT..JR is designed to provide instant, effective suctioning, independent of external sources of power

S-SCORT..JR can be pre-set to be activated immediately upon reaching the distressed patient, with no set up time required during the first few critical minutes of the code.

Suction power is controllable for those instances when full power would be considered harmful to the patient.

All controls are clearly labeled and easily accessible.

S-SCORT..JR is equipped with a disposable collection canister which features a bacterial filter to screen airborne particulates and a mechanical shut-off valve to prevent fluid overflow.

¹JAMA, October 28, 1992. Vol. 268, No. 16. Page 2203

“Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care”

IMPORTANT FEATURES

S-SCORT..JR® Model 90024B

PUMP

High performance diaphragm vacuum pump with ball bearing construction. Requires no maintenance under normal conditions. Oil-less, requires no lubrication and produces oil free air.

REGULATOR

Provides a method for the user to adjust negative pressure. Vents to atmosphere to prevent accumulation of pressures in excess of a predetermined setting. Ranges from less than 50mmHg to 525mmHg ($\pm 10\%$).

Note- Atmospheric pressure and altitude can affect negative pressure readings by 20% in extreme situations.

ELECTRICAL

Batteries are charged by direct connection to a dual mode automatic charger, UL 544 listed for hospital use. The first charging stage is a high rate designed to ensure recharging in 4 to 6 hours. The second stage is a "float" rate where the battery is maintained at full charge without overcharging. LEDS indicate when the power is on and when the battery is charging. (A separate LED on the front panel of the unit gives positive indication that the S-SCORT..JR is receiving input from the charging source.)

The batteries are sealed lead acid. No acid, vapor or water loss. Can be charged or discharged in any position. Absolutely no "memory" effects as in Ni-Cad.

Fully charged batteries will operate the pump for 30-45 minutes.

CARRYING CASE

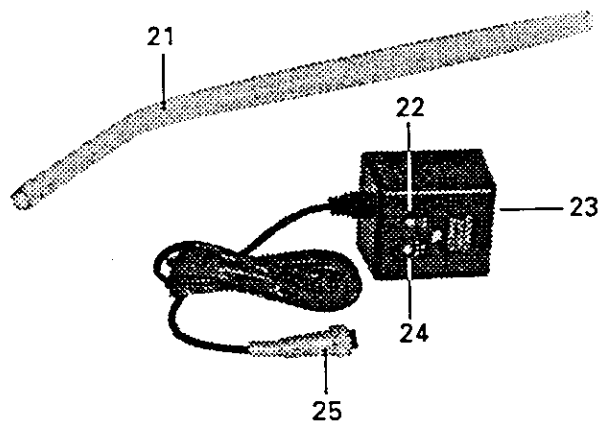
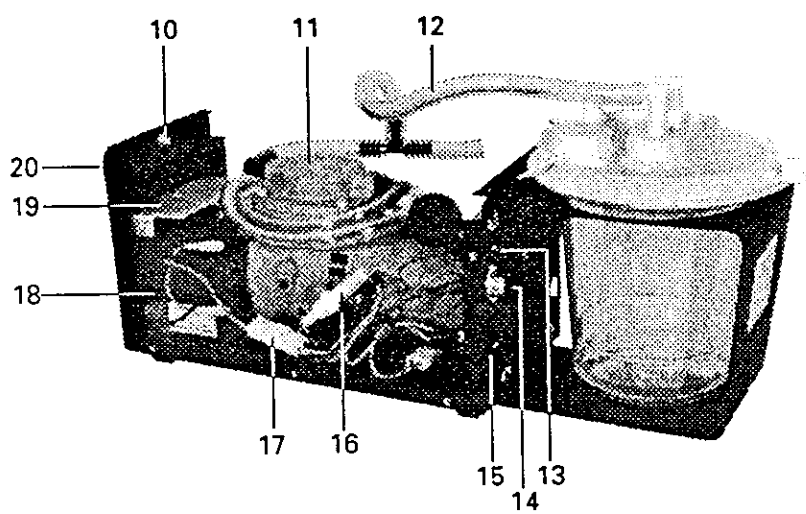
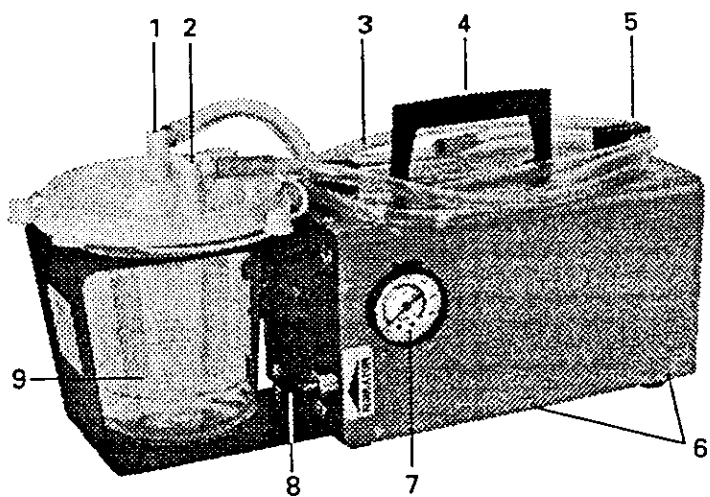
Lightweight, durable aluminum base with stainless steel cover.

CANISTER COLLECTOR

1200cc capacity. A bacterial filter screens airborne particulates and a shut-off valve prevents fluid overflow.

PERFORMANCE

S-SCORT..JR exceeds JAMA standards.



IMPORTANT FEATURES

S-SCORT...JR® Model 90024B

<u>KEY NO.</u>	<u>COMPONENT</u>	<u>FUNCTION</u>
1	Vacuum Port	Connects canister to vacuum line
2	Patient Port	Connects canister to patient tube
3	Patient Connecting Tubing	9/32" I.D., SSCOR Part #43200
4	Carrying Handle	
5	Cord Wrap	Patient tube retainer
6	Service Screws	To remove top from base
7	Vacuum Gauge	Indicates vacuum level in mmHg
8	Regulator Control	Adjusts negative pressure
9	Disposable Canister	1200cc, SSCOR Part #48041
10	1/4 Turn Screw	Secures back panel and battery
11	Pump	Provides vacuum source
12	Vacuum Line	Connects regulator to canister
13	Charging Indicator Light	Signifies electrical connection from charger to the unit
14	Charger Receptacle	To connect charger to battery
15	Off/Standby-On Switch	Turns unit On or Off
16	In-Line Fuse	Protects pump and wiring from electrical surge
17	Battery Connection	Quick disconnect
18	Battery	Supplies electrical power to pump
19	Battery Holder	Secures battery pack
20	Back Panel	Connects with two 1/4 turn screws
21	Vented Suction Tip	HI-D "Big Stick"® Large Bore Suction Tip with thumb control. SSCOR Part #44241
22	Battery "Charging" Light	Shows battery is charging
23	Battery Charger	Charges battery after each use
24	"Power On" indicator	Shows connection to 115V AC input
25	12V DC Electrical Plug	To connect charger to battery

OPERATING INSTRUCTIONS

S-SCORT..JR® Model 90024B

Daily Inspection: Establish a daily checklist to assure good performance of the equipment.

1. Confirm that the charger is charging the battery. Check charging light.
2. Run the unit .
3. Check for vacuum.
4. Check the regulator.

NOTICE: The first seven steps of these instructions should be followed in the routine check list. Component Key Numbers are indicated within ()s.

1. Connect battery charger (23) to 115V AC wall receptacle. Connect charger to pump by securely attaching charging plug (25) into battery receptacle (14). Check lights on charger: one light (24) indicates battery is receiving electrical power; the other light (22) indicates battery is charging. The charging light (high rate) will go out when the battery is 100% recharged to indicate the “float” stage in the charging circuit.

The charging circuit is designed to keep the batteries properly charged as long as the charger and the pump are connected to the electrical power source. Always keep the charger connected to the electrical power source. Always keep the charger connected to the S-SCORT..JR except for portable use.

The charging indicator light (13) on the front panel indicates that S-SCORT..JR is receiving electrical input from charger. It does not reflect the condition of the battery.

2. Attach patient connecting tube (3) to patient port (2) on the canister (9). Use 9/32” I.D. tubing.
3. Occlude patient connecting tube (3).
4. Turn Off/Standby-On switch (15) to On.
5. Observe negative pressure gauge (7).
6. Adjust negative pressure (while tubing is occluded) to desired level by turning regulator (8) clockwise to increase pressure, counter clockwise to decrease pressure. (Note: If negative pressure does not register, check to be sure the lid on the disposable canister is tight and vacuum connections are secure).
7. Proceed to suction.
8. Clear patient connecting tube with sterile water if necessary.
9. Reconnect battery (18) to charger (23), as soon as possible following the code, by securely attaching the charging plug (25) into the receptacle on the unit (14).

OPERATING INSTRUCTIONS contd.

S-SCORT..JR® Model 90024B

10. Battery charger (23) must be connected to a 115V AC electrical wall receptacle.
 - A. Observe indicator light showing "Power On" (24).
 - B. Observe indicator light showing "Battery Charging" (22).
11. Pumps may be reused before the indicator light shows the battery to be fully charged; however, the time of effective usage will be indeterminable.
12. **CAUTION** - Always turn pump switch to "Off/Standby" as soon as possible after the procedure. Rechargeable batteries will short out if they continue to discharge after they have reached the point where they do not have sufficient power to drive the pump. Be sure the switch is in the "Off/Standby" position until needed.

WARNING

1. For use by Medical Personnel trained in the techniques and in the use of Medical Suction Equipment.
2. The S-SCORT produces a powerful vacuum. Be sure the regulator is in the low setting when suctioning children and intubated patients.
3. Use a suction catheter with a thumb control when suctioning children and intubated patients. Use a thumb control on all suction tips.
4. Explosion Hazard: Do not use in the presence of flammable anesthetics.
5. Electrical Shock Hazard: Refer all servicing of electrical systems to qualified service personnel.

**NOTE: DO NOT ATTEMPT TO CHANGE THE ELECTRICAL SYSTEM.
THIS UNIT OPERATES ON 12-14V DC ONLY.**

6. Grounding reliability can only be achieved when connected to an equivalent receptacle marked "Hospital Only" or "Hospital Grade".
7. The mechanical shut-off in the canister is designed to close when the canister is filled with fluids. If the vacuum shuts down, empty contents immediately or replace the canister with a new one. Spare canisters are available from SSCOR, Inc. or your dealer.
8. Be sure the lid on the canister is tightened securely to prevent a loss of vacuum at a critical time.
9. Keep S-SCORT..JR connected to a 115V AC outlet at all times. It may, however, be disconnected for portable use.

SPECIAL CAUTION FOR BIOMEDICAL TESTING

10. Install a new canister before testing for negative pressure over 300mmHg to minimize possibility of an implosion which can occur in instances where a canister is aged or damaged.

MAINTENANCE
S-SCORT.JR[®] Model 90024B

Maintenance is minimal, but the pump is designed to suction fluids which can easily contaminate the system if they are not removed immediately.

Immediately following the code procedure, remove the collection canister, dispose of the canister according to established procedure and replace with a new one.

If the code procedure produced an excessive quantity of fluids, check the vacuum line for evidence of moisture. Replace vacuum line if moisture is evident. (Use 5/16" I.D. tubing).

If the vacuum line has filled completely, it is possible that fluids have reached the pump. Your engineering department can remove the head of the motor to check for moisture. If it is excessive, the pump should be decontaminated and returned to the factory for overhaul (see page 16 for pump diagram).

The charger can reflect the battery condition in one of two ways:

- A. The charging light will stay on longer than the time it normally takes to recharge the battery. Replace the battery.
- B. The charging light will go out immediately upon connection even though the battery has been completely discharged during operation. Replace the battery.

(The charging indicator light of the unit merely indicates you have a good connection from the charging source. It does not reflect the condition of the battery.)

When the battery can no longer hold a charge, order battery replacement. Please specify the model number of your pump when ordering a battery replacement.

If the charger appears defective, return it to the factory for repair. Do not attempt to repair charger.

Cleaning -- Use a mild detergent type cleaner. Do not use alcohol, solvents, or cleaning solutions. For interior cleaning, use dry compressed air.

For technical assistance, call . . . (800) 434-5211

TROUBLE SHOOTING

S-SCORT..JR® Model 90024B

<u>MALFUNCTION</u>	<u>POSSIBLE CAUSE</u>	<u>CORRECTIVE ACTION</u>
Unit does not function when switch is in the "ON" position	Loose Connections	Tighten Connections
	Battery discharged	Recharge Battery
	Battery defective	Replace Battery
	Charger defective	Check output of Charger
	Fuse has failed	Replace fuse (see page 14)
Unit does not suction when pump is running	Vacuum line loose	Check connections
	Canister defective	Replace Canister
	Canister lid is not tight	Resecure Canister lid
	Thumb vent on suction tip is not occluded	Occlude with thumb
LEDS on charger do not function	Defective wall outlet	Check outlet
	Dead Battery	Replace Battery
	Loose connections	Check Connections
Pump is sluggish	Residual materials have collected in the pump head	Refer to qualified service personnel for cleaning
	Battery is unable to retain a charge	Replace battery
	Loose connections	Check connections
System shuts down while suctioning heavy particulate matter	Vacuum line clogged at canister lid	Remove connector or canister lid and loosen obstruction
	Float valve has closed	Loosen float valve, empty contents, or replace canister (see Page 15)

GENERAL SPECIFICATIONS

S-SCORT..JR® Model 90024B

CHARACTERISTICS

SPECIFICATIONS

Size	17"L x 6"H x 5.5"W
Weight	11.5 pounds
Pump	12V DC oil-less diaphragm. 5.0 Amp. permanent magnet motor. Powers to 525mmHg ($\pm 10\%$) and 30 LPM.
Regulator	Controls negative pressure
Gauge	Calibrated in mmHg. Excessive pressure shaded in red
Power Source	
Battery	Sealed lead acid rechargeable 20 hour rate 4.0 Ah, charging temperature range 0 degrees centigrade to 40 degrees centigrade.
Capacity	30 to 45 minutes running time
Charger	Dual Mode, Automatic UL 544 listed.
AC Input	115V AC, 60Hz, 0.18A
DC Output	13.8V DC at end of charge. 0.05A
Battery Charging Indicator (Fast Charge)	Illuminates when battery is charging.
“Power On Indicator”	Illuminates when charger is connected to power source
Switch	On/Off rocker
Collection Canister	1200cc SSCOR Part #48041
Patient Connecting Tubing	Vinyl tubing 9/32" ID, 72"L SSCOR PART #43200
Suction Tip	HI-D "Big Stick®" Large Bore Suction Tip with thumb control. SSCOR PART #44241

WARRANTY
S-SCORT..JR[®] Model 90024B

SSCOR warrants that each new SSCOR product is free from defects in material and workmanship under normal use and service for a period of one year from date of purchase. If returned to SSCOR, the factory will arrange for repairs or replacement within the terms of the warranty. The defective instrument should be returned decontaminated and properly packaged, postage prepaid. Loss or damage in return shipment to the factory shall be the purchaser's risk.

The warranty shall not apply to any SSCOR product which has been repaired by anyone other than an authorized SSCOR representative, or altered in any way so as, in SSCOR's judgment, to affect its safety or efficacy, nor which has been subject to misuse, negligence, or accident, nor which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any SSCOR product which has been connected otherwise than in accordance with the instructions furnished by SSCOR.

This warranty is in lieu of all other warranties expressed or implied and of all other obligations or liabilities on SSCOR's part, and SSCOR neither assumes, nor authorizes any representative or other persons to assume for it, any other liability in connection with the sale of SSCOR products.

Batteries and disposable collection canisters are excluded from this warranty.

REPLACING THE FUSE AND BATTERY PACK

S-SCORT.JR® Model 90024B

Refer to Parts Diagram Page 6 and Electrical Diagram on this page.

Open back panel (20) by turning the 1/4 turn screw (10) to the left 1/4 turn.

Battery pack (18) is installed next to the back panel. Lift and pull battery toward you until terminal connections are accessible. The in-line fuse (16) is located at the Molex connection between the battery and pump.

The battery pack is connected to the system with Molex connections.

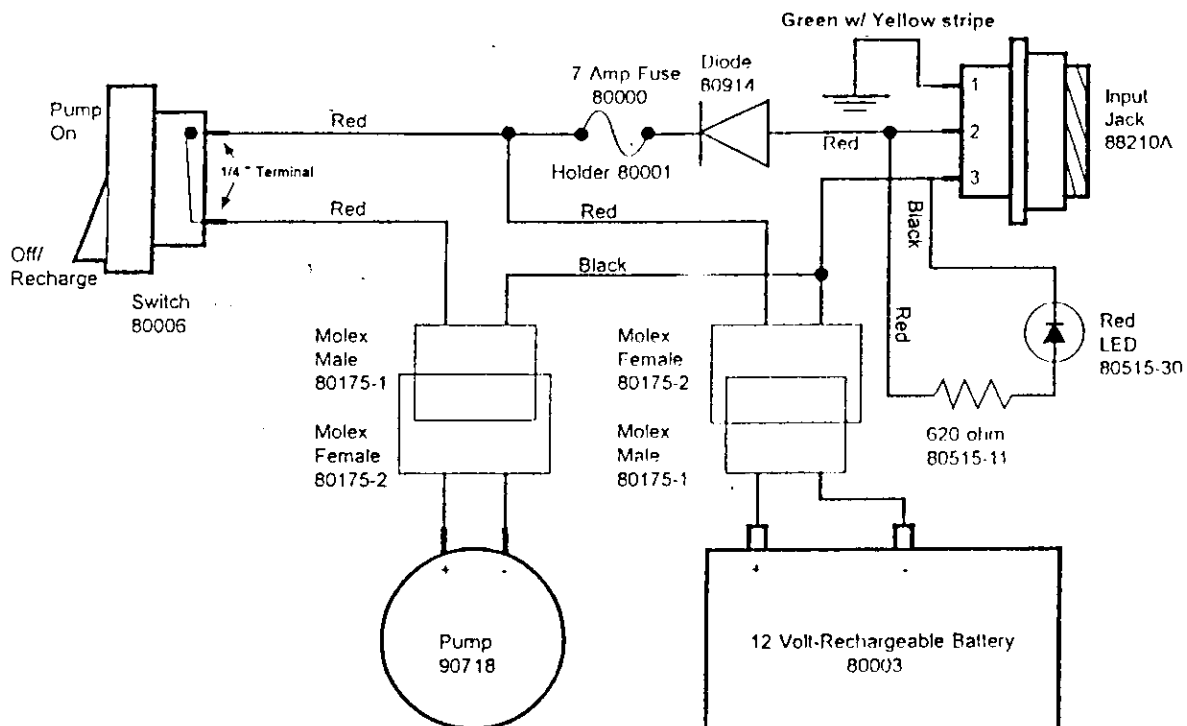
Pull connections apart with a straight pull on the Molex terminal (not the wire). The replacement battery pack will fit this same connection.

Dispose of the old battery according to local requirements for the disposal of sealed lead acid batteries.

Connect terminals to replacement - red wire to (+) positive pole, black wire to (-) negative pole. Replace battery in original position.

A bracket (19) on the back panel holds the battery in position. If back panel does not close easily, check position of battery to assure it rests on the floor of the chassis.

Place bracket under wiring while closing hinged back panel.



DISPOSABLE CANISTER

S-SCORT..JR[®] Model 90024B

The S-SCORT..JR utilizes a single patient suction canister.

The canister features a positive shut-off valve and foam guard which will close upon contact with foam or fluid. In addition, a clinically proven Bacterial filter screens out potentially hazardous airborne particulates.

WARNING

The mechanical valve in this lid will close when the canister is filled with fluids. Contents will have to be emptied in order to open the valve, or, preferably, the canister should be replaced with a new one. The bacterial filter will lose effectiveness after it has been exposed to fluids.

The canister must be in an upright position to collect fluids.

Order new canisters from SSCOR 800/434-5211 or your dealer. SSCOR Part #48041.

SPECIAL CAUTION FOR BIOMEDICAL TESTING

Install a new canister before testing for negative pressure over 300mmHg to minimize possibility of implosion, which can occur in instances where a canister is aged or damaged.

Aerostat Hi-Flow Bacterial Filter

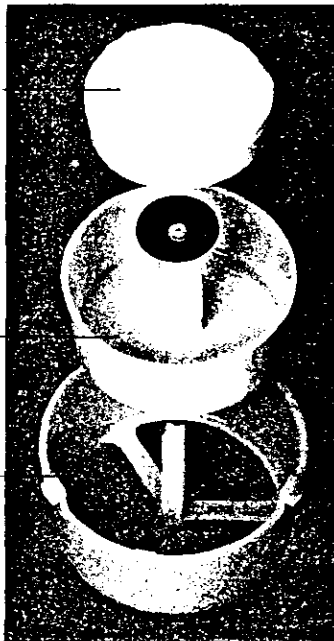
Clinically proven filter, 99.99% DOP rated (range 99.95), effectively filters aerosolized microorganisms and particulate matter with an air flow in excess of 1.9 cfm at 180mm mercury, and 0.7 cfm at less than 50mm mercury.

Positive Shut-Off Valve

Closes immediately when fluid reaches top. Soft gasket on float seals tight to prevent fluid overflow.

Foam Guard

Keeps float valve securely in place. Prevents premature shut-off.



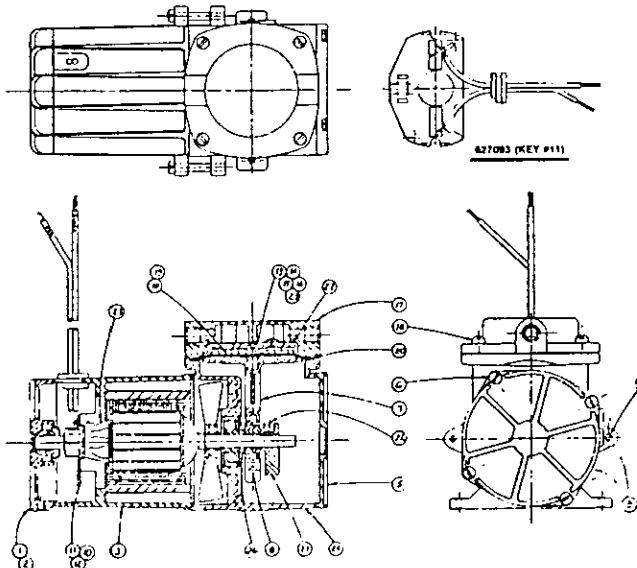
DRAWING AND PARTS LIST

S-CORT., JR. • MODEL 90024B

MODEL 107CDC18 & 107CDC20 PARTS LIST

Item No.	Part No.	Description	Qty.
1	814381	Motor End Cap Assy	1
2	625260	Screw-M.E.C.	2
3	602487	Motor Hsg. & Magnet Assy	1
4	625058	Screw-Sleeve to Hsg	2
5	814608	Front Cover	1
6	625266	Screw-Front Cover	4
7	607139	Connecting Rod	1
8	625114	Screw-Connecting Rod	1
9	633264	Flush Seal Pipe Plug	2
10	626516	Lockwasher	2
11	627093	Brush & Lead Wire Assembly	1
12	625407	Screw-Brush Assembly	2
13	617045	Valve Keeper	2
14	621102	Valve Flapper	2
15	654129	Valve Plate	1
16	625141	Screw Valve & Hold Down Plate	8
17	660131	Head	1
18	625444	Screw-Head	4
19	654648	Diaphragm Hold Down Plate	1
20	608148	Diaphragm	1
21	645374	Eccentric & Bearing Assembly	1
22	625244	Set Screw-Eccentric	1
23	608092	Armature Fan & Bearing Assy.	1
24	660662	Housing	1
25	625160	Screw-Flapper	2
26	613452	Screw-Eccentric	2
27	633438	Gasket-Valve Plate	1

Model 107 CDC 18			
Item	Detail	Add. Description	Qty.
21	645374	Ecc & Brg. Assy.	1



MODEL 107ADC18, 107ADC20 & 107ADC11 PARTS LIST

Item No.	Part No.	Description	Qty.
1	602487	Motor Shell Hsg. & Magnet	1
2	608092	Armature Fan & Bearing Assy	1
3	814381	Motor End Cap Assembly	1
4	625260	Screw-Motor End Cap	2
5	626516	Lockwasher	2
6	615403	Bearing Spacer	1
7	625114	Cap Screw-Connecting Rod	1
8	660662	Housing	1
9	641007	Filter	1
10	627093	Brush & Lead Wire Assy	1
11	616124	Filter Screen	1
12	607142	Connecting Rod	1
13	614612	Front Cover	1
14	625266	Screw-Front Cover	4
15	608146	Diaphragm	1
16	660255	Head	1
17	625444	Screw-Head	4
18	617045	Valve Keeper Strip	1
19	625160	Screw-Valve Flapper	1
20	645374	Eccentric & Bearing Assy	1
21	625244	Set Screw-Eccentric	1
22	656548	Exhaust Valve Plate	1
23	625141	Screw-Valve Plate	8
24	625120	O-Ring-Valve Plate	1
25	633525	Umbrella Valve	1
26	625058	Screw-Motor Sleeve to Hsg	2
27	633264	Flush Seal Pipe Plug	2
28	654652	Intake Valve Plate	1
29	638017	Screw-Filter	1
30	625407	Screw-Brush Holder	2
31	621102	Valve Flapper	1
32	623048	O-ring-Valve Plate Screw	4

Model 107 ADC 18			
Item	Detail	Add. Description	Qty.
21	645374	645373 Ecc & Brg. Assy	1

Model 107 ADC 11			
Item	Detail	Add. Description	Qty.
21	645374	645599 Ecc & Brg. Assy	1

